

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/00053

A. CLASSIFICATION OF SUBJECT MATTER

IPC: C12Q 1/68(2006.01);C07H 21/02(2006.01),21/04(2006.01)

USPC: 435/6;536/23.1,24.3

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6; 536/23.1, 24.3

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	BONNET et al. Thermodynamic basis of the enhanced specificity of structured DNA probes. Proc. Natl. Acad. Sci., USA. May 1999, Vol. 96, pages 6171-6176, see entire document.	18-21, 24 and 27-30 ----- 1-17, 22-23, 25-26
Y	US 6,355,437 B1 (NERI et al.) 12 March 2002 (12.03.2002), see at least for example Figures 18A-18D.	1-30
X --- Y	DU et al. Hybridization-Based Unquenching of DNA Hairpins on Au Surfaces: Prototypical "Molecular Beacon" Biosensors. J. Am. Chem. Soc. March 2003, Vol. 125, pages 4012-4013, see at least for example Figure 1.	18-22 and 24-30 ----- 12, 15-16
X --- Y	DUBERTRET et al. Single-mismatch detection using gold-quenched fluorescent oligonucleotides. Nature Biotechnology. April 2001, Vol. 19, pages 365-370, see at least, for example Figure 1, panel B.	18-21, 23-30 ----- 13, 15-16,

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

08 July 2006 (08.07.2006)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

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Continuation of B. FIELDS SEARCHED Item 3:
USPATFULL, USPG-PUBS and EUROPATFULL all via EAST

search terms: hairpin ; probe\$; Molecular beacon\$; Quench\$; solid support ; metal or gold; microparticles or nanoparticles, E value